

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :	MRB (QSI042) Approval		
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

Work Order ID 146963

Tuesday, June 07, 2016 9:04:42 AM

146963

Page 2

Item ID: D4151-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Lower Hardpoint Plate

Start Date: 6/21/2016 Start Qty: 10.00

10

Cust Item ID:

Required Date: 6/23/2016 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

150

Identify as per dwg & Stock Location: StoD

0.00

150

Packaging

Memo

0.10

Packaging

10

DAS
6

9-89

JUN 23 2016

160

QC21- Final Inspection - Work Order Release

0.00

160

QC

Memo

1.00

Quality Control

DAS

21

9-89

JUN 24 2016

DAS

21

9-89

JUN 24 2016

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Picklist Print

Tuesday, June 07, 2016 9:04:41 AM

Page 1

Work Order ID: 146963

146963

Parent Item: D4151-1

D4151-1

Parent Item Name: Lower Hardpoint Plate

Start Date: 6/21/2016

Required Date: 6/23/2016

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP Rev:A 10.06.24 new issue DD verf:EC
11.01.21 as per dwg revC DD verf:JLM

IPP Rev:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4151-1P		Purchased	No				Each	0.0000		10			
D4151-1P									**				
Lower Hardpoint Plate													
M304S11GA		Purchased	No			100	sf	107.2349	0.0508	0.534737			
M304S11GA									**				
304/316 0.125 Sheet													

10X Sp/6-6-21

JUN 24 2016

DAS
13
9.00

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT020	80.99998	
M129545	31.99998	
M129972	23.5	
M134284	25.5	
TPI	26.234932	
M134604	26.234932	

DQA: _____ Date: _____

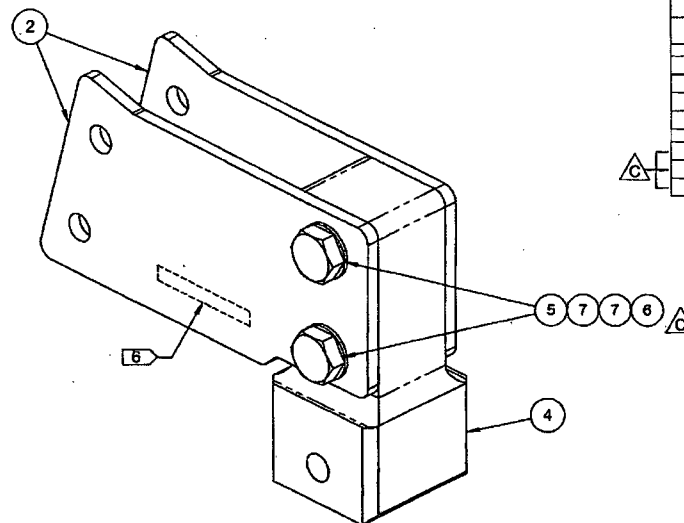


WORK ORDER NON-CONFORMANCE / UPDATE

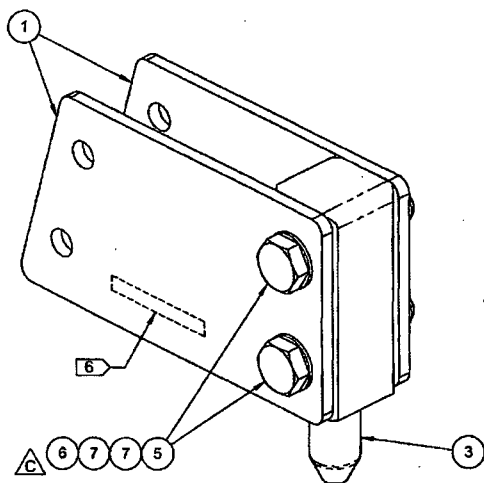
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									



D4151-043 BASKET FWD HARDPOINT ASSY (UPPER)



D4151-041 BASKET FWD HARDPOINT ASSY (LOWER)

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4151-04X" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT:
 - D4151-041 = 0.88 lbs
 - D4151-043 = 1.17 lbs

ITEM	QTY -041	QTY -043	P/N	DESCRIPTION
	X		D4151-041	BASKET FWD HARDPOINT ASSY (LOWER)
		X	D4151-043	BASKET FWD HARDPOINT ASSY (UPPER)
1	2		D4151-1	LOWER HARDPOINT PLATE
2		2	D4151-3	UPPER HARDPOINT PLATE
3	1		D4151-5	FWD BASKET INSTL STUD (LOWER)
4		1	D4151-7	FWD EYEBOLT RECEIVER (UPPER)
5	2	2	AN4C13A	BOLT
6	2	2	MS21043-4	NUT
7	4	4	NAS1149C0432R	WASHER

UNSCOLD ROLLED COPY
SUBMIT TO AMENDMENT
WITH FILE & FIVE
WO. REPAIR

146963. MJS
160526

RELEASED
R 2011-01-08

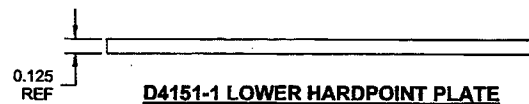
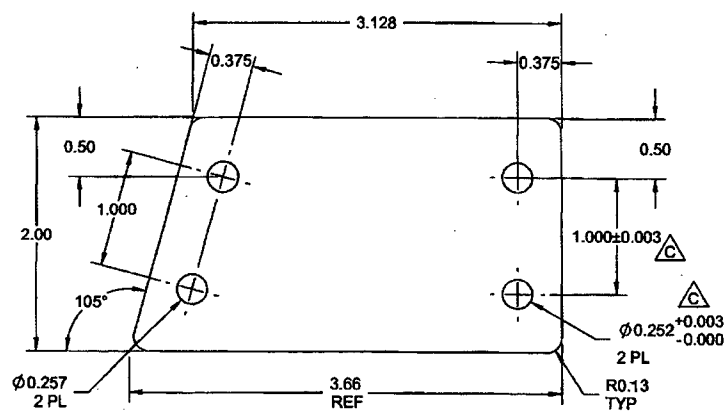
C	AM4 HARDWARE WAS AN3 (B6-1, C3-1 & D3-1); Ø0.252 WAS Ø0.191 (C5-2, D1-2); TIGHTENED TOL ON 1.000 DIM (C5-2, D1-2, C7-3, C3-3); Ø0.250 WAS Ø0.191 (C5-3, B4-3); 1.83 WAS 1.76 (C1-2), 2.84 WAS 2.78 (B3-3) AND 1.88 WAS 1.80 (C1-3) TO PRESERVE 1.5ED. REASON: SEE D407-787 DESIGN JOURNAL.	MB	10.12.14
B	ADDED D4151-5/7 (SHT 3); D4151-5 WAS D3911-1 (ZN B6-1 & D3-1); D4151-7 WAS D3911-3 (ZN C4-1 & D3-1) ITEMS #5, 6 & 7 REPLACE MS20615-4M20 (ZN C3-1, D3-1 & B8-1); Ø0.191 2 PL REPLACES Ø0.128 3 PL (ZN C5-2); Ø0.191 2 PL REPLACES Ø0.129 4 PL (ZN D1-2). REASON: SEE TR-D350-807-2 REV. B.	MB	10.07.05
A	NEW ISSUE	MB	10.08.22
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.12.14		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

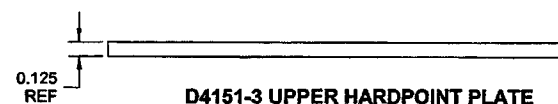
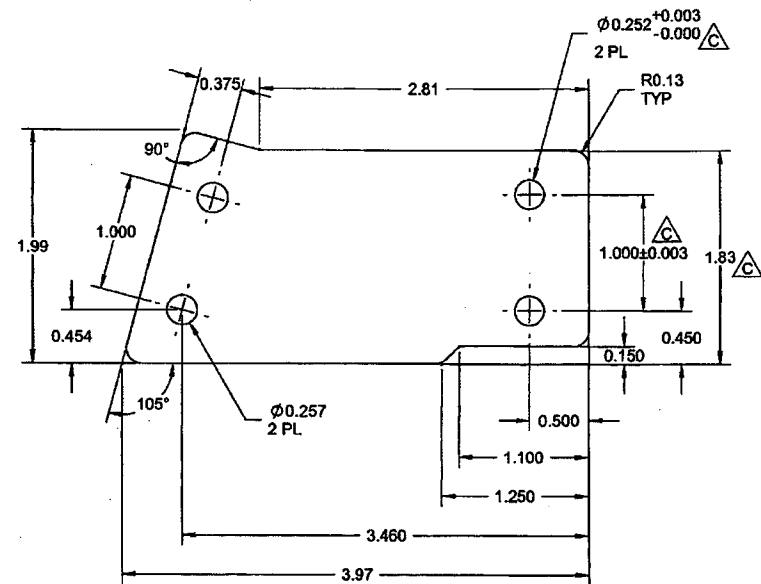
DRAWING NO. **D4151** REV. C
SHEET 1 OF 3

TITLE **BASKET FWD HARDPOINT** SCALE NTS

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D4151-1 LOWER HARDPOINT PLATE



D4151-3 UPPER HARDPOINT PLATE

NOTES:

1) MATERIAL: 303/304/316 STAINLESS STEEL SHEET ANNEALED 2B, 0.125 THK
PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240
REF. DART SPEC. M304S11GA OR M303S11GA

2) FINISH: NONE

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: IDENTIFY AT ASSEMBLY

7) WEIGHT:

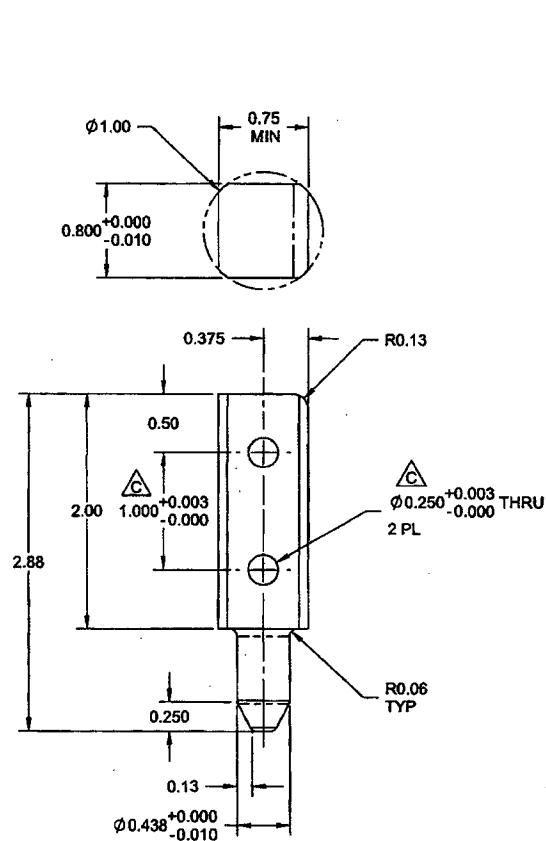
- D4151-1 = 0.24 lbs

- D4151-3 = 0.23 lbs

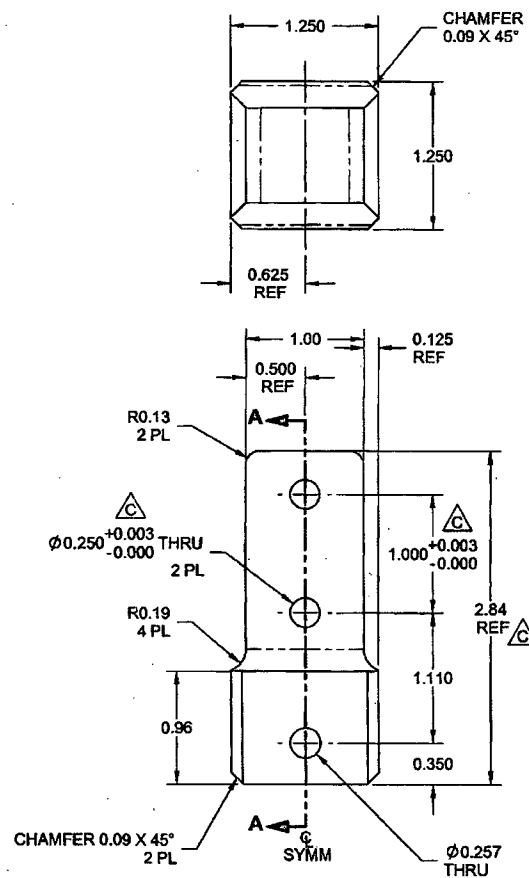
RELEASED
2011-01-18
JMD

DESIGN		DART AEROSPACE LTD
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED	SC	DRAWING NO. D4151 REV. C
MFG. APPR.		SHEET 2 OF 3
APPROVED	JMD	TITLE BASKET FWD HARDPOINT SCALE NTS
DE APPR.		
DATE	10.12.14	

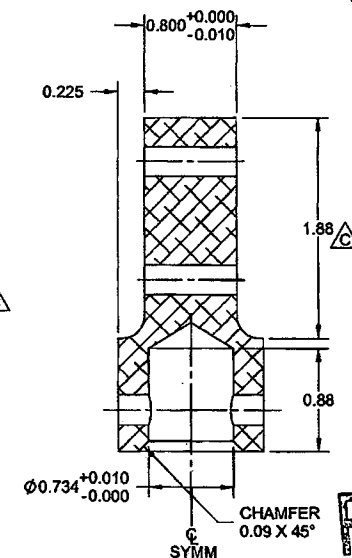
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D4151-5 FWD BASKET INSTL STUD (LOWER)



D4151-7 FWD EYEBOLT RECEIVER (UPPER)



SECTION A-A

NOTES:

- 1) MATERIAL -5: 303/304/316 STAINLESS STEEL ROUND BAR, PER ASTM A276 OR ASTM A582
PER DART SPEC M303R OR M304R
-7: 303/304/316 STAINLESS STEEL BAR, PER ASTM A276 OR ASTM A582
PER DART SPEC M303B OR M304B
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY AT ASSEMBLY
- 7) WEIGHT -5: 0.36 lbs
-7: 0.70 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN	<i>JS</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>SC</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>MB</i>	D4151	SHEET 3 OF 3
APPROVED	<i>MB</i>	TITLE	SCALE
DE APPR.	<i>H</i>	BASKET FWD HARDPOINT	NTS
DATE	10.12.14	COPYRIGHT © 2010 BY DART AEROSPACE LTD	
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RELEASED
R 2011-07-10
RELEASED



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO32646**

Purchase Order Date 6/8/2016

PO Print Date 6/8/2016

Page Number 11 of 12

Order From :
TPI INDUSTRIES INC.
148 RUE GOODFELLOW
DELSON, QUEBEC J5B 1V4
CANADA

VC-TPI001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 450-633-0484

Ship To Contact
Ship To Phone
Ship Via:
Ship Acct:

Buyer
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB Destination-Collect

27	D4149-1P	Crosstube Lug Plate, Aft	6/22/2016	FN	12.00	\$14.75	\$177.00
			Yes		Each		
			6/22/2016				

CUT AS PER DWG D4149 REV. C
B145911
MATERIAL 304 SHEET 11GA

Line Total: \$177.00

28	D4151-1P	Lower Hardpoint Plate	6/22/2016	FN	10.00	\$5.95	\$59.50
			Yes		Each		
			6/22/2016				

CUT AS PER DWG D4151 REV. C
B146963
MATERIAL 304 SHEET 11GA

Line Total: \$59.50

29	D4151-3P	Upper Hardpoint Plate	6/22/2016	FN	10.00	\$6.00	\$60.00
			Yes		Each		
			6/22/2016				

CUT AS PER DWG D4151 REV. C
B146919
MATERIAL 304 SHEET 11GA

Note:

6/8/2016

T.P.I. INDUSTRIES INC.

148 GOODFELLOW
DELSON, QUÉBEC J5B 1V4
CANADA
Tel: (450) 633-0484
Fax: (450) 633-0879

Packing Slip

Packing Slip No.: 7618
Date: 2016-06-17
Page: 1

Sold to:		Ship to:	
Dart Aerospace Chantal Lavoie 1270 Aberdeen Hawkesbury, Ontario K6A 1K7 Canada		Dart Aerospace Chantal Lavoie 1270 Aberdeen Hawkesbury, Ontario K6A 1K7 Canada	
Order No.: 32646		Sold By: JONATHAN LESSARD	
Shipped By:		Ship Date:	
Tracking No.:			

Item No.	Unit	Description	Quantity
d3405-1 ✓	Chaque	d3405-1 ✓	✓24
d3405-3 ✓	Chaque	d3405-3 ✓	✓20
d3912-5	Chaque	d3912-5 eyebolt plate	✓24
d4150-3	Chaque	d4150-3 arm plate	24
d4149-1	Chaque	d4149-1 crosstube lug plate aft	32
d2581	Chaque	d2581 mounting bracket	60
d4151-1	Chaque	d4151-1 lower hardpoint plate	10
d4151-3	Chaque	d4151-3 upper hardpoint plate	10

SP/16-6-21

Comment: Net / 30 from date of invoice 2% svc. chg. on invoices over 30 days

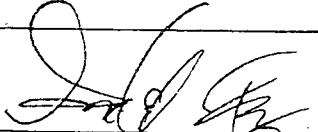
TPI Waterjet cutting follow up sheet

WC100127

machine hours	1162h
diamond hours	112h
mixing tube hours	0h
TAJ calibration	13-06-2016

customer po	part #	Qty	lot #	date done	cut by	quality spot check	Note
dart 32646	D3405-1	24	see mill test	14-06-2016	GR	Jonathan Lessard Gabriel Rioux	
dart 32646	D3405-3	20	see mill test	14-06-2016	GR	Jonathan Lessard Gabriel Rioux	
dart 32646	D3912-5	24	see mill test	14-06-2016	GR	Jonathan Lessard Gabriel Rioux	
dart 32646	D4150-3	24	see mill test	14-06-2016	GR	Jonathan Lessard Gabriel Rioux	
dart 32646	D4149-1	32	see mill test	14-06-2016	GR	Jonathan Lessard Gabriel Rioux	test approve by Eric Downing change hole size of .252 to .25
dart 32646	D2581	60	see mill test	15-06-2016	GR	Jonathan Lessard Gabriel Rioux	
dart 32646	D4151-1	10	see mill test	15-06-2016	GR	Jonathan Lessard Gabriel Rioux	test approve by Eric Downing change hole size of .252 to .25
dart 32646	D4151-3	10	see mill test	15-06-2016	GR	Jonathan Lessard Gabriel Rioux	change hole size of .252 to .25

Opérateur



Superviseur

